

## 6-1: Quadratic Expressions, Rectangles, and Squares

*Quadratic Expression:*

*Quadratic Equation:*

*Quadratic Function:*

*Standard Form of a Quadratic:*

Example 1: Matt Mitarnowski wants to fill a bulletin board with pictures. The board is 8 ft by 3 ft total. He puts a border of  $b$  inches inside the board. Find the usable area. (*Hint: Draw a picture.*)

What is the usable area if  $b = 1$ "? If  $b = 5$ "?

Example 2: Expand  $(n - 11)^2$  and  $(2x + 5y)^2$ . Do you notice a pattern?

*Binomial Square Theorem:*

Example 3: Expand  $(3q + 4r)^2$ .

Example 4: Multiply and simplify  $(2x - 3)(4x + 7)$ .

*Homework:*

"Don't be discouraged by a failure. It can be a positive experience. Failure is, in a sense, the highway to success, inasmuch as every discovery of what is false leads us to seek earnestly after what is true, and every fresh experience points out some form of error which we shall afterwards carefully avoid." - John Keats